Office Action Summary	Application No.	Applicant(s)	
	09/894,857	LEE ET AL.	
	Examiner	Art Unit	
	Wilson Lee	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6,8-51,76 and 77* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *32-51* is/are allowed.

6)☒ Claim(s) *6,8,9,15,31 and 76* is/are rejected.

7)☒ Claim(s) *10-14,16-30 and 77* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Remarks

Due to the updated search and the guidance from a senior examiner, claims 6, 8, 9, 15, 31 and 76 of application are rejected as follows. Examiner apologizes for any inconvenience.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 6, 8, 9, 15, 31, 76 are rejected under 35 U.S.C. 102(e) as being anticipated by Richardson et al. (6,606,735).

Regarding Claim 6, Richardson discloses a method using a physical layout system for physically laying out a microfluidic circuit comprising a plurality of microfluidic components, comprising:

- placing a first component (layer1) of the plurality of microfluidic components (layer1, layer2, out, comment) (See Figure 3A), wherein the plurality of microfluidic components comprise multilayered components (layer1, layer2);
- placing a second component (layer2) of the plurality of microfluidic components (See Figure 3A); and

- connecting the first component (layer1) to the second component (layer2) through CONNECT function (See figure 3A), wherein the connecting includes a design rule check (See Col. 1, 51-65 and Figures 3B and 3C).

Regarding Claim 8, Richardson discloses a method comprising:

- selecting template (7130 (See Figure 7);
- placing a first component (layer1) of the plurality of the microfluidic components on the template (See Figure 3A), wherein the plurality of microfluidic components each have an associated property (physical layer, just-in-time layer) (See Col. 6, lines 42-61);
- placing a second component (layer2) of the plurality of microfluidic components on the template (See Figure 3A); and
- connecting the first component (layer1) to the second component (layer2) (See Figure 3A).

Regarding Claim 9, Richardson discloses that the associated property has physical property (physical layer) (See Col. 6, 42-61).

Regarding Claim 15, Richardson discloses that each of the plurality of components includes a representative symbol (See Figures 5A-D).

Regarding Claim 31, Richardson discloses that the connecting comprises a design rule check (See Col. 1, 51-65 and Figures 3B and 3C).

Regarding Claim 76, Richardson discloses a computer program product comprising:

- code for selecting template (713) (See Figure 7 and codes shown in Col. 8);

- code for placing a first component (layer1) of the plurality of the microfluidic components on the template (See Figure 3A and codes shown in Col. 8), wherein the plurality of microfluidic components each have an associated property (physical layer, just-in-time layer) (See Col. 6, lines 42-61 and codes shown in Col. 8);
- code for placing a second component (layer2) of the plurality of microfluidic components on the template (See Figure 3A and codes shown in Col. 8); and
- code for connecting the first component (layer1) to the second component (layer2) (See Figure 3A and codes shown in Col. 8).

Allowable subject matter

Claims 10-14, 16-30 and 77 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 32-51 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art fails to explicitly disclose a method for physical layout of a microfluidic system comprising the steps:

- placing a microfluidic component on the template, wherein the microfluidic component comprises a component control channel and a component fluid channel such as required by claim 32;

- placing a component of the plurality of microfluidic components on a first layer of a plurality of layers, the component comprising a first fluid channel and a first control channel such as required by claim 36;
- placing a first symbol representing a first component of the plurality of microfluidic components, the first symbol comprising a first fluid channel symbol and a first control channel symbol, the first control channel symbol on a different layer of the plurality of layers than the first fluid channel symbol such as required by claim 37.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

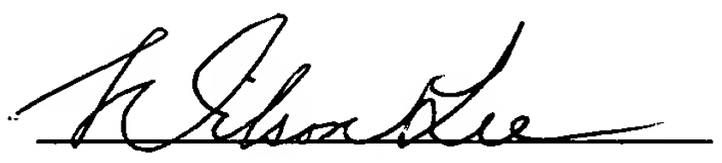
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. El-Ghoroury et al. (5,867,400) discloses an application specific processor and design method.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

Papers related to Technology Center 2800 applications may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The official fax number is (703) 872-9306.



Wilson Lee
Primary Examiner
U.S. Patent & Trademark Office

4/5/04